PROPOSED ADDITION OF THE NAME "CYZICUS" AUDOUIN, 1837 (CLASS CRUSTACEA, ORDER CONCHOSTRACA) TO THE "OFFICIAL LIST OF GENERIC NAMES IN ZOOLOGY" AND MATTERS INCIDENTAL THERETO

By **N. T. MATTOX**

(*University of Southern California, Los Angeles, California, U.S.A.*)

(Commission Reference : Z.N.(S.) 955)

The problem of proper generic and family names for certain Conchostracan Branchiopoda is of long standing. The present request is formulated in order to establish proper names for certain "estheriid" phyllopods of this group. Application is hereby made for the International Commission on Zoological Nomenclature to place the generic name *Cyzicus* Audouin, 1837 (*Ann. Soc. ent. France* 6 : x) (gender : masculine) on the *Official List of Generic Names in Zoology*, and therefore also the family-group name CYZICIDAE Stebbing, 1910, should be placed on the *Official List of Family-group Names in Zoology*.

2. The name Cyzicus was proposed by Audouin in 1837 (*op. cit.*) as the name for a new genus in order to separate the species *Limnadia tetracera* Krynicki, 1830 (*Bull. Soc. imp. Nat. Moscou* 2(11) : 176) from the genus *Limnadia* Brongniart, 1820. Audouin pointed out the basic morphological differences, particularly in the male, separating the very different genus *Limnadia* from his new genus *Cyzicus*. A very complete description of the species *Limnadia tetracera* was given by Krynicki, hence there is no question as to the validity of that specific name. Audouin very clearly indicated characters for his new genus and referred *Limnadia tetracera* Krynicki to the genus *Cyzicus*. At the same time he placed in this genus a new nominal species which he called *Cyzicus bravisii*. He gave, however, no description for this species and the name *Cyzicus bravisii* so published must stand as a *nomen nudum*. Accordingly, the only validly established nominal species placed by Audouin in the genus *Cyzicus* was *Limnadia tetracera* Krynicki which is therefore the type species by monotypy.

3. During the same year as Audouin's publication Rüppell *in* Straus-Durchheim, 1837 (*Abn. Senckenb. Mus.* 2(2) : 117) described a new genus of conchostracan and introduced also the new species *Estheria dahalacensis* Rüppell (*ibid.* 2(2) : 126). The general characters of the genus *Estheria* Rüppell, as then given, were the same as those of the genus *Cyzicus* Audouin. The generic

name *Estheria* Rüppell must be considered invalid as it is a junior homonym of *Estheria* Robineau-Desvoidy, 1830 (*Mém. présentés roy. Sci. Inst.* France **2** : 305) (Class Insecta, Order Diptera). The name *Estheria* Robineau-Desvoidy is still used for this genus of European parasitic flies, and dipterists have indicated that there is no available synonym for the genus, should this name be ruled out. It was Keilhack in 1910 (*Zool. Annal. Z. Gesch. Zool.*) **3** : 177—184) who clearly indicated the homonymy of *Estheria* Robineau-Desvoidy and *Estheria* Rüppell. Keilhack also made it clear that *Cyzicus* Audouin should be used for the crustacean genus.

4. Recognizing the homonymy of *Estheria* Rüppell, in 1842 Joly (*Ann. Sci. nat. Zool.*) (2) **17** : 293) proposed the generic name *Isaura* Joly as the name for the genus of crustaceans in question. Joly stated that his genus *Isaura* was identical with *Cyzicus* Audouin, but he would not recognize *Cyzicus* because he considered the original description of Audouin to be inadequate. There can be no question about this point since the use of *Cyzicus* Audouin was clearly indicated as a new designation of the previously described *Limnadia tetracera* Krynicki. This complies with the Law of Priority, Article 25. Therefore, *Isaura* Joly, 1842, must be declared invalid as a junior objective synonym of *Cyzicus* Audouin, 1837. A validation of the name *Isaura* Joly would cause much more confusion in modern literature than the use of the name *Estheria* Rüppell. As an objectively invalid name, the name *Isaura* Joly should now be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*.

5. Since the appearance of the work by Keilhach the name *Cyzicus* Audouin has gradually replaced the name *Estheria* Rüppell and is now in general use except for some attempts by certain paleontologists to validate the synonym *Isaura* Joly. Daday, 1915 (*Ann. Sci. nat.* (Zool.) **20**(9) : 39—330) in his monographic review of the conchostracans used the name *Cyzicus* recognising the synonymy of *Estheria* Rüppell. Daday, 1923 (*Ann. Sci. nat.* (Zool.) **6**(10) : 337) retains Rüppell's original species, *Estheria dahalacensis*, in the genus *Leptestheria* Sars, 1898. Daday, 1915, also established certain other generic names resulting from the division of the " estheriid " crustaceans, thus completely dropping the old name *Estheria* Rüppell. This system set up by Daday is in universal use today.

6. As the generic name reference varied with different authors so has the family name. Baird in 1849 (*Proc. zool. Soc. Lond.* **17** : 84) incorrectly applied the family name LIMNADIIDAE with the genus *Estheria* Rüppell included. Dana in 1852 (*U.S. Explor. Exped.* **14**(2) : 1306) uses the generic name *Cyzicus* under the family LIMNADIIDAE which is a family of conchostracans with very different characters than those of *Cyzicus*. Many workers have followed Packard, 1874 (*in* Hayden's *U.S. geol. geogr. Surv.* : 618) using *Estheria* in the family ESTHERIADAE (later used as ESTHERIIDAE Sars, 1900 (*Archiv Math.* Naturv. 22(6)). However, Stebbing in 1910 (*Ann. S. Afr. Mus.* 6(4) : 486) properly established the family CYZICIDAE with *Cyzicus* Audouin as the type genus. In 1915 Daday, apparently unaware of the paper by Stebbing, in his classic monographic study on the Conchostracan Phyllopods divided the old genus *Cyzicus* Audouin into a number of genera. He set up the family CAENESTHERIIDAE with one of his genera divided from *Cyzicus*, namely *Caenestheria* Daday, as the type genus (*Ann. Sci. nat.* (Zool.) **20**(9) : 49). Boch in 1953 (Jour. Paleo. **27**(1) : 62) used the generic name *Isaura* Joly in the family CYZICIDAE for some fossil forms. Pennak in 1953 (*Fresh Water Invertebrates of the U.S.* : 344) places all species in the genus *Caenestheriella* Daday under the family CAENESTHERIIDAE, he does not use *Cyzicus* Audouin for any of the North American species. Various combinations of these names have been used by other paleontologists as well as by writers on the living species. It is readily seen that the proper names are the generic name *Cyzicus* Audouin in the family CYZICIDAE Stebbing. This follows the Copenhagen Decisions on Zoological Nomenclature : 36, Decision 54(1)(b) in which reference is made to family name changes resulting from the change of the type genus necessitated by this type becoming a junior homonym. The family name should then be CYZICIDAE which would be based on the oldest available generic name for the group, namely *Cyzicus* Audouin, 1837.

7. As part of the action to be taken in the present case, the generic name *Estheria* Robineau-Desvoidy, 1830 (Class Insecta, Order Diptera), which, as explained in paragraph 3 above, preoccupies the generic name *Estheria* Rüppell 1837, in Crustacea, should be placed on the *Official List of Generic Names in Zoology*. Not being myself familiar with the entomological literature concerned, I asked the Secretary to the International Commission to consult with one of the specialists in the Order Diptera at the British Museum (Natural History) on the question of the species to be entered on the *Official List* as the type species of the above genus. Mr. Hemming accordingly consulted Dr. F. I. van Emden (*Commonwealth Institute of Entomology*, c/o *British Museum* (*Natural History*), *London*), who kindly furnished the information given below. It appears that the nominal species *Dexia cristata* Meigen, 1826 (*Syst. Beschr. bekannt. europ. zweifl. Ins.* **5** : 41) is currently treated by all authors as the type species of the genus *Estheria* Robineau-Desvoidy. It was indeed so selected by Robineau-Desvoidy himself in 1863. Technically, however, that selection is invalid, for the above nominal species was not cited as belonging to the genus *Estheria* when that genus was established in 1830. The nominal species then included did, however, comprise the then new nominal species *Estheria imperatoriae* (: 306), which today is generally identified with *Dexia cristata* Meigen, the names *imperatoriae* Robineau-Desvoidy and *cristata* Meigen being treated as synonyms of one another. The first valid type selection for the genus *Estheria* was that of *E. imperatoriae* Robineau-Desvoidy which was so selected by Townsend in 1916 (*Insecutor Inscit. menstr.* **4** : 7). The specific name *cristata* Meigen should be placed on the *Official List of Specific Names in Zoology* at the same time that the generic name *Estheria* Robineau-Desvoidy, 1830, is placed on the *Official List of Generic Names in Zoology*.

8. The proposals which I accordingly submit for consideration are that the International Commission on Zoological Nomenclature should :—

(1) place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

   (a) *Cyzicus* Audouin, 1837 (gender : masculine) (type species by monotypy : *Limnadia tetracera* Krynicki, 1830) (Class Crustacea, Order Conchostraca) ;

   (b) *Estheria* Robineau-Desvoidy, 1830 (gender : feminine) (type species, by selection by Townsend, (1916) : *Estheria imperatoriae* Robineau-Desvoidy, 1830) (Class Insecta, Order Diptera) ;

(2) place the under-mentioned specific names on the *Official List of Specific Names in Zoology* :—

   (a) *tetracera* Krynicki, 1830, as published in the combination *Limnadia tetracera* (specific name of type species of *Cyzicus* Audouin, 1837) ;

   (b) *dahalacensis* Rüppell, 1837, as published in the combination *Estheria dahalensis* (specific name for a species of *Leptestheria* Sars, 1889) ;

   (c) *cristata* Meigen, 1826, as published in the combination *Dexia cristata* ;

(3) place the under-mentioned family-group name on the *Official List of Family-group Names in Zoology* : CYZICIDAE Stebbing, 1910 (type genus : *Cyzicus* Audouin, 1837) ;

(4) place the under-mentioned generic name on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

   (a) *Estheria* Rüppell, 1837 (a junior homonym of *Estheria* Robineau-Desvoidy, 1830) ;

   (b) *Isaura* Joly, 1843 (a junior objective synonym of *Cyzicus* Audouin, 1837) ;

(5) place the under-mentioned family-group names on the *Official Index of Rejected and Invalid Family-group Names in Zoology* :—

   (a) ESTHERIADAE Packard, 1874 (an Invalid Original Spelling for ESTHERIIDAE) ;

   (b) ESTHERIIDAE Sars, 1900 (correct spelling of ESTHERIADAE) (invalid because the name of the type genus is invalid as a junior homonym of an older generic name, *Estheria* Robineau-Desvoidy, 1830).